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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/727,476

12/04/2003

Lowell L. Winger

03-1980

6234

24319

7590

06/30/2006

LSI LOGIC CORPORATION  
1621 BARBER LANE  
MS: D-106  
MILPITAS, CA 95035

EXAMINER

HSIA, SHERRIE Y

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/727,476	WINGER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sherrie Hsia	2622	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5,8,9,11,13-17,19 and 20 is/are allowed.
- 6) ☒ Claim(s) 6,7,10,12 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

**DETAILED ACTION*****Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “a plurality of second angles between said 90 degrees and 180 degrees noninclusive relative to a horizontal axis though said particular position” as claimed in claim 6, “generating a plurality of pad samples beyond a boundary ...said differences” as claimed in claim 7, “generating a plurality of pad samples beyond a boundary ...said current samples” as claimed in claim 10, “(i) adaptive switching ... (iv) nonadaptive switching at said pixel level” as claimed in claim 12, and ““(i) adaptive switching ... (ii) nonadaptive pixel level switching” as claimed in claim 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The abstract of the disclosure is objected to because at line 7, “filed” should --field--.  
Correction is required. See MPEP § 608.01(b).
3. The lengthy specification has not been fully checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. The disclosure is objected to because of the following informalities:  
On page 6 line 4, page 12 line 7, page 21 line 14, “filed” should be --field--.  
Appropriate correction is required.

### *Claim Objections*

5. Claims 1, 10 and 20 are objected to because of the following informalities:  
In claim 1, line 7, “filed” should be --field--.  
In claim 10, line 15, “third” should be --fifth--.  
In claim 20, line 10, after “said”, --means for-- should be inserted.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. Claims 6, 7, 10, 12 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. “a plurality of second angles between said 90 degrees and 180 degrees noninclusive relative to a horizontal axis though said particular position” as claimed in claim 6, “generating a plurality of pad samples beyond a boundary ...said differences” as claimed in claim 7, “generating a plurality of pad samples beyond a boundary ...said current samples” as claimed in claim 10, “(i) adaptive switching ... (iv) nonadaptive switching at said pixel level” as claimed in claim 12, and ““(i) adaptive switching ... (ii) nonadaptive pixel level switching” as claimed in claim 18 are not disclosed in the specification. The specification never describes a plurality of second angels which are between 90 degrees and 180 degrees noninclusive relative to a horizontal axis, and never describes the generation of a plurality of pad samples beyond a boundary of the current field. Also, the specification never describes the generation of the interpolated samples by using adaptive switching at a frame level, or adaptive switching at a pixel level or nonadaptive switching at the frame level or nonadaptive switching at the pixel level. Therefore, applicant must clarify these matters.

***Allowable Subject Matter***

7. Claims 1-5, 8, 9, 11, 13-17, 19 and 20 appear allowable over prior art.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kieu (6181382) discloses a HDTV up converter having temporal interpolator, vertical interpolator and directional interpolator

Ng (5689305) shows a system for deinterlacing digitally compressed video having a memory, temporal and spatial deinterlacer.

Dougall (5019903) shows a spatial interpolation between lines of a supersampled digital video signal.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherrie Hsia whose telephone number is (571) 272-7347.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**Any response to this action should be mailed to:**


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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Or faxed to:**

**(571) 273-8300**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is (571) 272-1000.

  
**Sherrie Hsia**  
**Primary Examiner**  
**Art Unit 2622**

SH  
June 25, 2006